1. A programmable 4-bit simple teaching computer, said computer comprising

a central memory section,

a central processing unit, and

an input /output section allowing for manual programming of the computer.

whereby said computer can be used to teach students the basic architecture of computers.

2. A programmable teaching computer as in claim 1 wherein said computer is designed to accommodate a maximum of sixteen instructions but implements four basic machine language instructions.

3. A programmable teaching computer as in claim 2 and wherein said computer includes light emitting diodes so that students can follow visually the operation of the simple computer.

4. A programmable teaching computer as in claim 1 wherein said memory includes a RAM capable of storing only sixteen 4-bit instructions.

5. A programmable teaching computer as in claim 1 wherein said Central Processing Unit has a arithmetic logic unit having only the add function and no other.

6. A programmable teaching computer as in claim 5 wherein the memory of said computer includes a RAM capable of storing only sixteen 4-bit instructions.

7. A programmable teaching computer as in claim 1 wherein said Central Processing Unit contains an Arithmetic Unit containing only an adder and a Sum Register.

8. A programmable teaching computer as in claim 1 wherein said computer also includes control circuit functions including a clock, a timing signal generator, an instruction fetch and an instruction execution function.

9. A programmable teaching computer as in claim 1 wherein said computer also Includes two Central Processing Unit Registers, both of which are 4-bit register.

10. A programmable teaching computer as in claim 1 wherein said computer's components are all arranged on four bread boards which are interconnected.

11. A programmable teaching computer as in claim 1 and including a Timing Signal Generator with a clock, counter, decoder and inverter.

12. A programmable teaching computer as in claim 1 and including a Control Signal Generator having two AND/OR gate chips.

13. A programmable teaching computer as in claim 1 and including two Registers With output buffers.

14. The programmable teaching computer as in claim 1 wherein said Memory includes a RAM connected to a Program Counter which has an Output Buffer.

15. The programmable teaching computer as in claim 14 wherein an Instruction Decoder is also connected to said RAM.

16. A programmable teaching computer as in claim 1 wherein said computer components are positioned on four bread boards.

17. A programmable teaching computer as in claim 16 wherein a first breadboard contains a Timing Signal Generator.

18. A programmable teaching computer as in claim 17 wherein a second breadboard contains a Program Counter and an Arithmetic Unit.

19. A programmable teaching computer as in claim 18 wherein a third breadboard contains two Data Registers and a Bus consisting of four parallel conductors used by the chips for interchanging data.

20. A programmable teaching computer as in claim 19 wherein a fourth breadboard contains a RAM and an Instruction Decoder.

21. A programmable teaching computer as in claim 19 wherein a Control Signal Generator is located on the second, third and fourth breadboard.

22. A computer kit for use in teaching computer architecture and programming, said kit containing a set of integrated circuit chips for constructing a Central Processing Unit, an input/output component and a Memory, said kit also containing at least four breadboards having power strips.

23. A computer kit as in claim 22 wherein said Memory contains sixteen 4-bit data locations.

24. A computer kit as in claim 22 and including integrated circuit chips, power supply, switches, wire, LEDs, resistors, a capacitor and a lab instruction manual.